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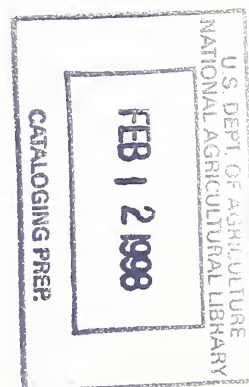
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JAPANESE
EFFORTS
TO **Diversify**
Sources
OF AGRICULTURAL
IMPORTS



ABSTRACT

Japan, the leading foreign market for American farm products, has developed a long-term policy of diversifying sources of its agricultural imports to hedge against supplies being reduced or shut off from major sources and to encourage other countries to purchase Japan's industrial products. Programs are underway for assisting developing countries to increase agricultural production. Implementation is primarily through Japan's foreign aid programs--both government and private enterprise participate.

The commodities on which most emphasis is being placed are corn, grain sorghum, cassava (for animal feed), oilseeds, tropical fruits, and silk. Programs are underway in all developing regions of the world. Currently, the most ambitious programs are in Southeast Asia. By 1975, it seems reasonable to expect that Southeast Asia will be exporting to Japan 1.5 million to 2.0 million metric tons of corn and 200,000 to 300,000 tons of grain sorghum. A roughly equivalent amount of grain sorghum may be moving from Australia to Japan. Other items that are expected to show a significant increase in volume of imports by Japan by 1975 include dried cassava, tropical fruits and fruit products, raw silk, cotton, and tobacco.

Key Words: Japan, Southeast Asia, Japanese aid programs, U.S. agricultural trade, Japanese agricultural trade, world agricultural trade

CONTENTS

	Page
HIGHLIGHTS.....	v
INTRODUCTION.....	1
FOREIGN TRADE.....	2
FOREIGN AID.....	9
Technical Cooperation Program.....	10
Other Official Programs.....	11
The Role of Private Enterprise.....	12
ACTIVITIES BY COUNTRY.....	13
Indonesia.....	13
Thailand.....	14
Cambodia.....	15
Laos.....	16
South Vietnam.....	17
Philippines.....	17
India.....	18
Other South and Southeast Asia.....	18
Other Areas.....	19
OUTLOOK.....	20
Feed grains and Other Foodstuffs.....	21
Oilseeds.....	22
Tropical Fruits.....	22
Silk.....	22
Tobacco.....	23
Cotton.....	23
Livestock Products.....	23

HIGHLIGHTS

Japan is a leading foreign market for American farm products, importing about \$1 billion of U.S. agricultural commodities in 1968. Among the most important of these commodities were wheat, corn, grain sorghum, tobacco, cattle hides, lemons, alfalfa meal, soybeans, cotton, and tallow.

However, the U.S. share of the market has declined and was only 30 percent of total imports in 1968, compared with 34 percent in 1965. Competition from other foreign producers is on the increase, as Japan vigorously pursues its policy of diversifying the sources of its farm product imports.

Japan's economic well-being is highly dependent on foreign trade--in particular, the export of industrial goods. In 1968, total exports and total imports each approximated \$13 billion; imports of agricultural products totaled \$3.4 billion. The United States is Japan's most important trading partner, followed by the South and Southeast Asia region. Japan maintains a favorable trade balance with each. However, countries of South and Southeast Asia want Japan to take more of their farm products, to reduce their unfavorable trade balances with Japan.

Japan has developed a long-term policy of diversifying sources of its farm product imports to hedge against supplies from major sources being reduced or shut off and to encourage other countries to purchase more of its industrial products. Programs have been initiated for actively helping developing countries, particularly those in Southeast Asia, increase their agricultural production. Emphasis is being placed on producing the farm commodities that Japan needs to import and helping recipient countries attain self-sufficiency in food production. The policy is implemented primarily through Japan's foreign aid programs. The Government of Japan and private Japanese enterprise actively participate and cooperate in carrying out overseas development projects. Increased production of farm products for export to Japan can thus be expected.

Volume increases will be small for the next year or two but will grow more rapidly thereafter. By 1975, the competitive effect of the overseas development projects just starting can be expected to reach significant levels in Japanese markets for a few American farm products.

Most emphasis is being placed on such commodities as corn, grain sorghum, cassava (for animal feed), oilseeds, tropical fruits, and silk. Programs are underway in all the less developed regions of the world; however, the most ambitious programs for production of these commodities are currently in the Southeast Asian countries--particularly Indonesia, Thailand, and Cambodia--and Australia. It seems reasonable to expect that by 1975, Southeast Asia will be exporting 1.5 million to 2.0 million tons^{1/} of corn to Japan, and between

^{1/} Tonnages in this report are metric.

200,000 and 300,000 tons of grain sorghum. A roughly equivalent amount of grain sorghum may be moving from Australia to Japan. Exports from Southeast Asia to Japan of dried cassava for use in mixed feeds will probably be many times the 1967 level of only some 10,000 tons. Oilseeds may eventually represent a major item of trade, but until the mid-1970's, it seems unlikely that oilseed production in Southeast Asia will expand to a point where it will have a significant impact on the Japanese market. A very substantial increase in exports of South and Southeast Asian tropical fruits and fruit products to Japan can be expected by 1975. There should be a large increase in exports of raw silk from Southeast Asia. Exports of cotton and tobacco from South Asia are expected to increase by 1975.

JAPANESE EFFORTS TO DIVERSIFY SOURCES OF AGRICULTURAL IMPORTS

by

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INTRODUCTION

Japan's desire to diversify the sources of farm products it imports has two principal roots. Despite its success as a trading and manufacturing nation and the development of a very high level of agricultural technology, owing to a scarcity of farmland, Japan lacks sufficient supplies of agricultural products to serve its population. As a consequence, the Japanese have turned to trade as a means of obtaining the necessary commodities; in this, they have been all too successful in maintaining a favorable balance of trade. As a result, many underdeveloped countries have been considering restrictions on imports from Japan if the balance so unfavorable to them is not redressed. One way for the Japanese to help redress this balance is to encourage production of needed agricultural products for which Japan can exchange its manufactured goods. Programs to expand agriculture in these countries also serve the Japanese desire to escape dependence on a limited number of suppliers, who might be cut off by war, crop failure, or other events.

Japan's programs to develop new sources for its imports of farm products and to increase productivity and crop variety in older ones has aroused concern among American exporters of farm products. This concern has led to an apprehension that as a result of these developments the United States might face increasing difficulty in maintaining its preeminent position in Japan's market for farm products. Despite this concern, however, no attempts had been made to compile and analyze the information available about the nature and extent of current programs.

This report serves to fill this gap by describing the major Japanese programs, Government and private, being undertaken and putting them into some sort of perspective. It is concerned primarily with the principal countries benefiting from the programs and the programs' effect on the ability of these countries to increase exports to Japan. Emphasis is placed on those commodities that Japan imports in bulk from the United States.

FOREIGN TRADE

Japan, with its population of 102 million, provides one of the world's leading markets for imported farm products. Except for a skilled, educated, disciplined, and industrious work force, the country has relatively few resources--including agricultural resources. Thus, a high level of foreign trade is vital to the well being of the nation's economy. With one of the highest economic growth rates in the world, Japan has become increasingly important as an importer and exporter. In recent years, Japan's gross national product has been expanding at a real rate of about 12 percent a year and in 1968 was exceeded only by that of the United States and the Soviet Union.

In 1968, continuing a steady rise, Japan's total imports were close to \$13 billion (table 1). Exports were also about \$13 billion, reflecting the country's efforts to balance import and export trade each year. Approximately 94 percent of Japan's total exports were manufactures or processed products, while agricultural products made up 26 percent of total imports.

The United States is Japan's most important trading partner. In 1968, exports to the United States totaled \$4.1 billion, 32 percent of total exports; imports from the United States were valued at \$3.5 billion, 27 percent of total imports. Until very recent years, the balance of trade between

Table 1.--Japanese foreign trade, by area, averages 1955-64, annual 1965-68

Year	United States	South and Southeast Asia	Other	Total	As percentage of total	
	United States	South and Southeast Asia	Other	Total	United States	South and Southeast Asia
	Mil. <u>dol.</u>	Mil. <u>dol.</u>	Mil. <u>dol.</u>	Mil. <u>dol.</u>	<u>Pct.</u>	<u>Pct.</u>
Exports:						
Average--						
1955-59...	663	679	1,398	2,741	24.1	24.8
1960-64...	1,384	1,140	2,543	5,066	27.3	22.5
1965.....	2,479	1,618	4,355	8,452	29.5	19.1
1966.....	2,969	1,799	5,008	9,776	30.4	18.4
1967.....	3,012	1,919	5,511	10,442	28.8	18.4
1968.....	4,086	2,255	6,631	12,972	31.5	17.4
Imports:						
Average--						
1955-59...	1,125	615	1,584	3,323	33.8	18.5
1960-64...	1,972	908	3,240	6,123	32.2	14.8
1965.....	2,366	1,126	4,677	8,169	29.0	13.8
1966.....	2,658	1,315	5,550	9,523	27.9	13.8
1967.....	3,212	1,489	6,962	11,663	27.6	12.8
1968.....	3,527	1,642	7,818	12,987	27.2	12.6

the United States and Japan was in favor of the United States. In 1968, however, the balance was nearly \$0.6 billion in Japan's favor.

The South and Southeast Asia region ranks next in importance among Japan's trade partners. In 1968, exports to the region totaled \$2.3 billion--17 percent of total exports. Imports were valued at \$1.6 billion, nearly 13 percent of the total. Japan's favorable trade balance with South and Southeast Asia has been widening year by year.

Favorable trade balances with the United States and the South and Southeast Asian countries make it possible for Japan to import more from the rest of the world than it exports. In 1968, exports to all other regions totaled \$6.6 billion, while imports totaled \$7.8 billion.

Japan's imports of agricultural products totaled \$3.4 billion in 1968 (table 2). Imports of U.S. farm products accounted for about \$1 billion. Among the most important items from the United States were wheat, corn, grain sorghum, lemons, alfalfa meal, tobacco, cattle hides, soybeans, cotton, and tallow. South and Southeast Asian countries also supply several of these commodities, including corn, grain sorghum, tobacco, and cotton (table 3). Other leading farm imports from South and Southeast Asia include rice, pulses, rubber, copra, palm kernels, cottonseed, castor oilseed, sesameseed, kapokseed, jute, and abaca.

Because it relies so heavily on foreign trade, Japan has an unusually strong incentive to buy farm products where the purchases will help expand and diversify markets for its exports, largely manufactures. This incentive is most likely to influence buying decisions where the seller has an unfavorable balance of trade with Japan and where Japan has strong, long-term ambitions as a supplying nation. This is the situation in trade with the countries of South and Southeast Asia. A number of these countries have sought to have Japan purchase increased quantities of their products. Most have little to export other than farm products. Increasingly, Japan faces import restrictions against her products unless the trade gap can be narrowed by increased Japanese purchases of farm products.

It has long been the policy of Japan to diversify sources of imports as a hedge against the possibilities of supplies from major sources being reduced or shut off because of such events as wars, crop failures, strikes, and breaks in diplomatic relations. Another reason for the policy is Japan's desire to improve its bargaining position with exporting nations.

In the last few years, Japan has developed a policy of actively helping less developed countries to increase production of farm commodities that it needs to import. This policy is implemented through Japan's economic and technical assistance programs. Japanese private enterprises are being encouraged to take part in this effort along with Government agencies. Countries in all of the underdeveloped regions of the world are involved, as are a few developed countries--especially Australia. However, the bulk of the effort is taking place in Asia, particularly in Southeast Asia. These policies represent a threat to the maintenance or further expansion of U.S. sales of several important farm commodities to Japan.

Table 2.--Japanese imports of selected agricultural commodities and U.S. share, 1965-68

Commodity	1965			1966		
	United States		Total	United States		Total
	Amount	:As percentage : of total		Amount	:As percentage : of total	
	1,000 dol.	Pct.	1,000 dol.	1,000 dol.	Pct.	1,000 dol.
Beef and veal, fresh and frozen.....	6,916	14	0	10,558	37	0
Mutton and lamb, fresh and frozen.....	22,010	1	0	38,960	--	0
Poultry meat, fresh and frozen.....	4,602	3,606	78	6,044	4,509	75
Nonfat dry milk.....	13,605	11,644	86	20,819	7,603	37
Wheat.....	251,000	132,000	53	279,000	150,000	54
Rice.....	144,700	43,460	30	131,290	25,052	19
Barley.....	40,954	17,157	42	30,724	18,360	60
Corn.....	231,458	156,628	68	243,284	153,140	63
Grain sorghum.....	83,763	75,149	90	130,998	116,699	89
Lemons.....	6,800	6,799	100	8,658	8,658	100
Almonds.....	2,756	2,535	92	4,222	3,592	85
Pineapples, fresh.....	2,236	836	37	3,529	390	11
Raisins.....	5,875	5,351	91	6,729	5,480	81
Pulses.....	28,929	3,598	12	25,181	2,355	9
Sugar.....	145,535	--	0	120,552	--	0
Wheat bran.....	26,081	3,203	12	26,115	6,292	24
Oilseed cake.....	12,612	6,800	54	12,764	4,231	33
Alfalfa meal.....	13,248	13,157	99	18,180	13,073	99
Lard.....	10,631	8,246	78	10,886	8,007	74
Tobacco.....	44,643	26,155	59	61,520	46,291	75
Hides and skins.....	58,611	34,161	58	98,440	55,500	6
Soybeans.....	255,756	179,654	70	271,985	222,331	82
Wool.....	331,348	--	0	402,898	--	0
Cotton, raw.....	433,003	132,998	31	413,818	110,249	27
Tallow, beef.....	41,664	37,323	90	45,676	40,340	88
Total, selected items.....	2,218,736	900,745	41	2,422,830	1,007,189	42
Total import of foods, beverages, and agricultural raw materials.....	2,835,100	973,497	34	3,227,000	1,080,996	33

-- = none or negligible

Continued

Table 2.--Japanese imports of selected agricultural commodities and U.S. share, 1965-68--Continued

Commodity	1967				1968			
	United States		Total	Pct.	United States		Total	Pct.
	Amount	As percentage of total			Amount	As percentage of total		
	1,000 dol.				1,000 dol.			
Beef and veal, fresh and frozen...	13,576	36	0	13,311	177	1		
Mutton and lamb, fresh and frozen...	40,626	--	0	41,141	--	0		
Poultry meat, fresh and frozen...	5,912	3,832	65	11,027	5,433	49		
Nonfat dry milk	32,234	148	0	17,762	1,621	9		
Wheat	308,000	159,000	52	289,000	144,000	50		
Rice	82,232	15,831	19	44,790	414	1		
Barley	39,922	9,402	24	38,341	752	2		
Corn	270,961	110,246	41	307,656	153,544	50		
Grain sorghum	160,022	138,833	87	135,787	110,321	81		
Lemons	11,610	11,610	100	15,165	15,165	100		
Almonds	5,736	5,294	92	6,372	6,114	37		
Pineapples, fresh	3,314	233	7	3,338	201	6		
Raisins	6,672	5,570	83	6,544	6,004	92		
Pulses	27,758	3,293	12	20,763	2,187	14		
Sugar	117,855	--	0	142,237	--	0		
Wheat bran	15,734	1,101	7	15,008	2,738	18		
Oilseed cake	7,284	1,149	16	12,701	5,154	41		
Alfalfa meal	19,528	19,268	99	18,609	18,504	99		
Lard	8,346	7,185	86	8,895	7,808	88		
Tobacco	56,877	39,731	70	50,656	34,031	67		
Hides and skins	74,734	45,433	61	74,062	47,682	64		
Soybeans	272,016	223,580	82	274,120	227,742	83		
Wool	353,478	--	0	348,195	--	0		
Cotton, raw	432,318	134,340	31	502,201	124,153	25		
Tallow, beef	35,235	30,838	88	34,740	29,894	86		
Total, selected items	2,401,685	965,953	40	2,432,421	943,639	39		
Total import of foods, beverages, agricultural raw materials.....	3,278,100	1,025,144	31	3,389,000	1,013,282	30		

-- = none or negligible.

Table 3.--Japanese imports of selected agricultural products, averages 1955-64, annual 1965-68

Commodity and country	Average		Annual			
	1955-59	1960-64	1965	1966	1967	1968
	:	:	:	:	:	:
	- - - - - Million dollars - - - - -					
Rice.....	92.7	27.4	144.7	131.3	82.2	44.8
Corn.....	36.2	137.8	231.5	243.3	271.0	307.7
Sorghum.....	1.8	25.8	84.1	132.0	161.3	136.4
Pulses.....	11.2	13.3	28.9	25.2	27.8	20.8
Cassava.....	--	--	0.2	0.2	0.5	0.6
Tobacco.....	8.7	28.9	44.6	61.5	56.9	50.7
Copra.....	10.0	15.6	19.0	19.4	20.2	27.2
Palm kernels.....	4.2	3.7	3.5	3.4	2.5	3.5
Cottonseed.....	6.2	10.9	17.1	23.6	19.7	21.3
Castor oilseed.....	3.6	4.7	5.1	7.6	8.4	7.5
Sesameseed.....	4.1	6.0	6.9	8.7	10.2	9.0
Kapokseed.....	1.9	3.2	4.5	4.8	2.5	2.4
Rubber.....	84.9	114.5	101.3	109.7	102.3	95.4
Cotton.....	385.9	439.7	437.4	420.3	440.8	508.8
Jute.....	7.8	15.4	20.4	18.6	20.7	17.4
Abaca.....	9.6	9.1	7.1	5.3	4.4	3.6
Total.....	668.8	856.0	1,156.3	1,214.9	1,177.3	1,257.1
Total agricultural.....	1,542.1	2,165.4	2,835.1	3,227.0	3,278.1	3,386.9
Total, all imports.....	3,323	6,123	8,169	9,523	11,663	12,987
	- - - - - 1,000 metric tons - - - - -					
Rice.....	627	223	967	812	509	271
United States.....	53	21	290	156	99	2
Burma.....	137	28	46	30	--	15
Thailand.....	140	74	145	85	128	88
Corn.....	557	2,275	3,434	3,598	3,960	5,144
United States.....	252	867	2,302	2,234	1,584	2,542
Burma.....	7	1	1	3	--	--
Cambodia.....	25	29	26	29	20	15
Indonesia.....	2	--	4	65	120	10
Thailand.....	69	432	576	767	699	633
Sorghum.....	31	456	1,431	2,247	2,584	2,314
United States.....	25	425	1,284	2,005	2,242	1,887
Thailand.....	--	1	20	58	37	19
Pulses.....	94	114	206	179	221	152
United States.....	2	10	37	24	30	21
Burma.....	41	61	96	34	70	39
Thailand.....	--	61	98	19	70	17

Continued

Table 3.--Japanese imports of selected agricultural products, averages 1955-64, annual 1965-68--Continued

Commodity and country	Average		Annual			
	1955-59	1960-64	1965	1966	1967	1968
	1,000 metric tons					
Cassava.....	--	--	3	3	10	11
United States.....	--	--	--	--	--	--
Thailand.....	--	--	2	3	10	4
Indonesia.....	--	--	--	--	--	3
Tobacco.....	5	16	25	32	30	27
United States.....	4	9	12	22	18	16
India.....	1	1	1	1	3	3
Copra.....	48	90	94	108	112	126
United States.....	--	1	2	--	--	--
Indonesia.....	17	9	23	34	10	48
Philippines.....	2	18	41	48	74	54
Palm kernels.....	28	27	22	23	19	23
United States.....	--	--	--	--	--	--
Indonesia.....	19	17	10	12	13	17
Malaysia, West.....	7	10	7	8	4	6
Cottonseed.....	74	139	217	266	216	246
United States.....	--	--	1	--	--	--
Cambodia.....	--	4	4	3	--	2
Thailand.....	5	10	10	17	28	39
Castor beans.....	24	33	40	63	64	43
United States.....	--	--	--	--	--	--
Cambodia.....	--	2	1	1	--	--
Indonesia.....	--	--	1	1	3	2
Thailand.....	19	27	26	41	34	24
Sesame seed.....	19	29	33	38	40	39
United States.....	--	--	--	--	--	--
Cambodia.....	1	2	2	4	5	4
Indonesia.....	--	1	3	4	4	2
Thailand.....	2	3	2	3	2	3
Kapok seed.....	23	41	56	53	33	36
United States.....	--	--	--	--	--	--
Cambodia.....	1	5	8	2	5	5
Indonesia.....	13	15	14	21	18	18
Thailand.....	8	20	33	28	8	14

Continued

Table 3.--Japanese imports of selected agricultural products, averages 1955-64, annual 1965-68--Continued

Commodity and country	Average		Annual			
	1955-59	1960-64	1965	1966	1967	1968
	1,000 metric tons					
Rubber.....	134	203	222	242	258	273
United States.....	--	--	--	--	--	--
Cambodia.....	--	1	6	6	4	5
Indonesia.....	18	11	84	98	80	53
Malaysia, West.....	104	106	45	56	70	105
Sabah.....	3	7	3	2	3	3
Sarawak.....	1	11	4	5	8	7
Singapore.....	1	3	10	4	6	9
Thailand.....	3	55	58	60	73	77
Vietnam, South.....	--	3	7	6	8	6
Cotton.....	569	734	735	749	801	407
United States.....	215	312	250	228	271	124
Pakistan.....	53	33	21	25	23	17
India.....	40	40	35	25	37	15
Burma.....	5	4	4	--	--	--
Jute.....	37	70	94	84	113	116
United States.....	--	--	--	--	--	--
India.....	--	--	--	--	--	--
Pakistan.....	33	43	27	27	23	29
Thailand.....	3	27	65	55	86	81
Abaca.....	27	24	22	18	16	15
United States.....	--	--	--	--	--	--
Philippines.....	27	24	21	18	16	14

FOREIGN AID

Japan's foreign aid policy is closely tied to the nation's commercial policies of maximizing exports of industrial products and diversifying sources of imports. Many aid programs are designed to promote overseas production of agricultural products for import by Japan. These programs contribute to diversification of sources of raw materials, show a responsiveness to the less-developed countries' (LDC's) desire that Japan buy more from them, provide these countries with additional foreign exchange to purchase Japanese products, and contribute to a generally more favorable economic and political climate for Japanese business activities. Japan's aid programs also place emphasis on helping LDC's attain self-sufficiency in food production. Leadership of overseas programs is provided by the Ministry of Foreign Affairs (MFA) and Ministry of International Trade and Industry (MITI).

Japan's foreign aid program can be said to have started with reparation payments to Asian countries following World War II. The technical cooperation aspects of the program are usually considered to date from 1954, when Japan joined the Colombo Plan.

Japan offers economic assistance in a variety of forms--bilateral official loans and grants, contributions to multilateral organizations, technical assistance, private investment, and export credits. The country also continues to make war reparations. Bilateral official loans, which have expanded rapidly in recent years, have contributed to the development of basic industries. For example, they have financed the construction of a fertilizer plant in Pakistan. These loans have also helped to relieve balance of payments problems and arrest inflationary spirals in India and Indonesia. War reparations and other official grants have contributed in numerous ways to the economic development of LDC's in Asia. Japan's technical assistance programs are especially adapted to Asian conditions. The exchange of persons for technical training and teaching helps familiarize other Asians with Japanese agricultural machinery and other products. It has also drawn Japan somewhat closer, culturally and politically, to the nations of South and Southeast Asia. Private export credits and private investments are growing rapidly.

According to official statistics, Japan's foreign aid--government and private--approached \$1.1 billion in 1968. This figure represented a 23-percent increase over the previous year's total and was over three times the amount of 5 years earlier. It represented 0.74 percent of gross national product (0.94 percent of national income). Mainly responsible for the large gain in 1968 were \$569 million of exports on a deferred-payment basis, almost a 50-percent increase from the preceding year. Direct private investments totaled \$122 million, compared with \$84 million a year earlier. Direct Government aid decreased by nearly 9 percent to \$357 million. In 1968, more than two-thirds of the aid went to countries of South and Southeast Asia. The Government has announced its intention to double foreign aid during the next 5 years.

Agriculture, fisheries, forestry, mining, and industry have all received considerable attention. Relatively more resources are now directed to agricultural development than to development of other sectors. Greater emphasis on agriculture stems from the importance being placed on this sector by the

countries of South and Southeast Asia and from Japan's need to diversify sources of agricultural imports.

The first Southeast Asian Development Conference was held in Tokyo in April 1966. At this meeting, Japan was instrumental in setting up the Conference on Agricultural Development in Southeast Asia, which met in Tokyo in December 1966. In 1967, Japan pledged \$100 million to the Asian Development Bank for the Agricultural Development Fund on the understanding that it would be earmarked for Southeast Asia. In 1968, Japan announced that it would contribute another \$100 million to the agricultural fund. In addition, under the International Grains Arrangement of the General Agreement on Tariffs and Trade, Japan will give over half of her contribution to the Southeast Asian countries in the form of farm supplies (fertilizer, chemicals, machinery, and tools).

Technical Cooperation Program

As stated earlier, Japan's technical cooperation activities were started in 1954, following its affiliation with the Colombo Plan. In 1955, Japan accepted a few technical trainees from Southeast Asia and sent some technical experts to foreign countries. The Overseas Technical Cooperation Agency (OTCA) has handled technical assistance programs since 1962, when it was created as an agency of MFA. At five international centers in Japan, OTCA receives foreign participants for all types of technical training under the Colombo Plan and other technical cooperation schemes. Technical cooperation schemes under OTCA wholly financed by the Japanese Government include Japanese Technical Cooperation Schemes (Colombo Plan and others), the Junior Expert Technical Cooperation Program (begun in 1963), and the Japanese Overseas Cooperation Volunteers Program (begun in 1965).

The main functions of OCTA are: receiving foreign technicians, assignment of Japanese experts and overseas cooperation volunteers, establishing overseas technical cooperation centers and medical facilities, conducting development surveys for LDC's, and providing equipment and materials. The agency maintains overseas offices in Thailand, India, and Cambodia, and has 17 training centers in operation in Asia. OTCA's budget, provided by the Japanese Government, increased from about \$4.5 million in 1962 to \$18.9 million in 1968.

From 1955 to June 30, 1968, 10,104 foreign participants received technical training in Japan; of these, 8,493 were from Asian countries. Of the total number of participants, 2,349, or 23 percent, were agricultural trainees. Japan is now receiving over 1,000 technical trainees annually for all fields, with almost 80 percent of this number from Asia.

During the same period (1955-68), Japan sent 3,024 experts abroad--1,106 to Asian countries. Of the total sent to all countries, 659 were agricultural technicians. In June 1968, 267 Japanese agricultural experts were working in technical cooperation schemes in Southeast Asia. These experts are fully qualified technicians, and they are given orientation and language training before being sent overseas.

In mid-1967, OTCA established the Agricultural Development Cooperation Scheme and the Primary Products Development Cooperation Scheme. The agricultural Development Scheme consists of an initial survey, a long-term plan of operation, provision of Japanese agricultural specialists, and supply of necessary equipment for LDC's. The main purpose of this program is to help LDC's increase their agricultural output, and thus improve their economic position.

The Primary Products Scheme was established to promote production of exportable agricultural products, such as corn, grain sorghum, and oilseeds. Japan establishes operations in a country, sends specialists in agriculture, marketing, and other areas, and provides fertilizers and machinery for demonstration purposes. Through Japanese trade and banking institutions, OTCA arranges loans for the developing country to purchase the necessary materials from Japan and arranges for importation of the commodities produced into Japan. Through this scheme, Japan aims to ensure a more stable supply of primary products by developing new and diversified sources.

Japan establishes technical cooperation centers overseas, providing a team of Japanese experts and the necessary equipment. The recipient country furnishes land, buildings, and staff. The centers carry out technical training, demonstration projects, or research. The first agricultural cooperation center was established in 1960 in East Pakistan; another agricultural center is located in India; and two are in Cambodia. In addition, a survey has been conducted for a rice production demonstration center in the Philippines.

The Overseas Cooperation Volunteers Program is comprised of young people who have average technical knowledge and skills and a desire to help the developing countries. By June 30, 1968, 313 young people were serving overseas; of the 107 in agricultural activities, 92 were located in the Far East.

Other Official Programs

Japan External Trade Organization (JETRO), a corporate entity established in 1958, has primary responsibility for promotion of exports abroad, receiving policy guidance from MITI. Most of JETRO's budget is furnished by MITI. The balance consists of fees, service charges, and prefectural and industrial contributions. JETRO has a worldwide network of about 48 offices, 16 trade centers, and six machinery centers. It sponsors trade fairs and missions, conducts market research, and operates an information service. A newer but also major function of JETRO is to promote imports from the LDC's. Such promotion is primarily accomplished by arranging and financing exhibits in Japan of products available in each country for export to Japan. Four such exhibits are scheduled annually. There is much interest in them on the part of the Japanese and the LDC's because of Japan's need to import such a wide range and variety of products and the LDC's desire to supply them. JETRO has a long waiting list of prospective exhibitors.

Several other organizations have been organized or proposed by MFA or MITI. Most involve both Government and private participation. MITI has sponsored a fund for the export of fertilizers to be used by demonstration farms set up by Japanese technicians in South and Southeast Asia. MITI has also

announced the intention of establishing an Asian Trade and Development Corporation to provide farm machinery and supplies to LDC's for modernizing agricultural production, using as funds some of the income from duties on primary products imported from Southeast Asia.

The Role of Private Enterprise

Japanese private enterprise is cooperating closely with MFA and MITI in overseas agricultural development activities. Some private enterprise activities are tied directly to official programs. Others are conducted independently under the broad general policies of the Japanese Government on promoting agricultural production abroad. Most of the effort is concentrated in Southeast Asia, with major emphasis being placed on the production of feed-stuffs, oilseeds, tropical fruits, and silk. However, considerable capital has been invested recently in projects to promote production of grain sorghum and beef cattle in Australia.

In 1969, the Export-Import Bank of Japan released results of a survey of private Japanese firms with capital investments in business operations abroad. It indicated that the objective of 77 percent of manufacturing firms is the export of industrial equipment and raw materials--in other words, the maintenance and development of overseas markets. Some 71 percent of the agriculture, forestry, fisheries, and mining sector firms are aiming at developing imports of needed materials into Japan.

Enterprises engaging in dissimilar lines of business are banding together to undertake agricultural development abroad. The International Agricultural Development Company, financed by 30 interested firms, was formed in 1968 to supply technical assistance and farm requisites on a commercial basis to the developing countries of Asia. The company, which will have full cooperation of Japanese Government agencies, has a provisional contract to produce rice in Malaysia as a joint venture with the Japanese Government. It also has plans for a livestock-raising venture in Okinawa.

Eight companies associated with the Fuji Bank have organized a consultative group for jointly taking up agricultural development projects abroad. Known as the Fuyo Group, these companies will also cooperate with governments and private enterprises in LDC's in agricultural development, irrigation, and other projects and may establish joint ventures. The companies feel that grouping will reduce risks in agricultural projects requiring considerable time for development. The development companies will work closely with the agricultural development section of OTCA to further Japan's economic aims in Southeast Asia.

In 1969, MFA sponsored the establishment of the Asian Private Joint Investment Company. This company was formed to provide a means for channeling farm requisites and technical assistance to developing countries by private business interests. Twenty-four companies are cooperating in this effort, and projects are under way in four Southeast Asian countries. The companies' basic objectives are: (1) to increase production of farm products for import by Japan and (2) to expand overseas markets for Japan's agricultural equipment, fertilizers, chemicals, and other farm supplies. Products being promoted under

this program are soybeans, sesameseed, silk, corn, grain sorghum, and cassava for feed.

ACTIVITIES BY COUNTRY

Indonesia

Indonesia, with a population of approximately 116 million, has an economy based largely on agriculture. Consequently, the country represents a very large potential market for Japanese industrial products. Also, it possesses great potential for expanding the production of certain agricultural commodities that Japan must import in increasing volume. During the long period of economic deterioration under the regime of former President Sukarno, the potential for expanding trade between the two countries could not be exploited. Indonesia's foreign exchange position became critical and remains so. However, since the change in government following the 1965 coup, the country's economic and trade policies have become more pragmatic.

In 1967, Japanese survey teams visited Java and Sumatra to look into the possibilities of expanding production of corn for export to Japan. There have been several similar missions since that time. Specific projects have been developed by the Japanese Government, Japanese private trade interests, or both. Some dozen projects are currently underway or in the process of being developed. These include corn production and export projects in Java and Sumatra, and a grain sorghum production and export scheme in Java. Other agricultural projects include a center for inspecting seed and training workers in seed multiplication and distribution, an agricultural mechanization training center, a rinderpest control project, the rehabilitation of an agricultural high school, and the expansion and improvement of natural silk production.

At the Colombo plan corn production project in east Java, Japanese technicians are concentrating on development of suitable varieties, disease control measures, and problems of drying and fumigating corn for export. Private Japanese interests are installing equipment for corn drying, fumigating, and handling at the port of Surabaya. Three separate crop areas, of some 500 acres each, have been planted to corn for the past 2 years. Yields are reported to be three to four times the average for the area. Some unexpected disease problems have been encountered, but technical experts working at the three locations express confidence that these will be overcome. One of the major problems in expanding corn production in east Java is that practically all potentially arable land is now fully utilized. Nevertheless, higher yields should make it possible for east Java to export a substantial amount of corn to Japan.

In south Sumatra, a Japanese private company, working with an Indonesian agricultural cooperative, is developing a large agri-industrial complex including corn production, ports, and highways. The new enterprise expects to soon be farming some 10,000 acres itself and intends to contract with local farmers to cultivate an additional 10,000 acres under its supervision. The entire production, which is expected to expand to 100,000 tons annually at completion of the initial phase of the project, is to be exported to Japan. The enterprise will receive liberal tax treatment by the Government of Indo-

nesia, and the required machinery and equipment can be imported from Japan duty-free.

Two Japanese companies recently announced the initiation of a joint farm production operation on Sulawesi Island. Crops to be grown include corn, peanuts, castorbeans, sesame, and tea. The first phase of the operation calls for establishment of a 500-acre corn and peanut pilot farm. All produce will be exported to Japan. An eventual export of 100,000 tons of corn annually is visualized.

Another private Japanese firm is promoting the production of grain sorghum in the Krawang area of Java near Djakarta. The firm aims to cultivate a quarter million acres and export the grain to Japan. This project may eventually provide 100,000 to 200,000 tons annually for export to Japan.

In Indonesia, as in several other LDC's of Asia, Japan is assisting in the development of silk production for export. Japanese experts consider west Sumatra to be favorably situated for the production of raw silk, and a Japanese natural silk expert visited the area in early 1969 to encourage rehabilitation and expansion of the industry.

The Government of Japan has technicians assigned to several projects in west Java to assist in increasing the production of rice. In 1969, Japan had five experts in seed multiplication, seed distribution, and farm mechanization working with an Indonesian program (known as BIMAS) to boost rice yields. Also, there were Japanese rice technicians at experimental farms at Maura, at Kaman-di, and at a paddy demonstration farm near Bogor. Japan is assisting Indonesia's rice production program to help the country become self-sufficient in this important food commodity. It is not anticipated that Japan will import rice from Indonesia.

Thailand

Japan is very interested in promoting increased agricultural production in Thailand, and Japanese private enterprise is cooperating by purchasing Thai products. Over the past several years, numerous Thai agricultural technicians have been trained in Japan at Japanese expense. The Government of Thailand is putting increasing pressure on Japan to take more Thai farm products, to reduce Thailand's trade deficit with Japan.

Japan's efforts to encourage Thai agriculture may be said to date from 1961, when an importers cartel, the Thai Corn Importers Committee, was formed in Japan. In negotiations each year with the Thai Government this committee commits itself to purchase certain amounts of Thai corn. For the marketing year beginning September 1, 1969, Japan agreed to take at least 540,000 tons of Thai corn. The cartel operates with the backing of MITI, the Ministry of Agriculture and Forestry (MAF), and the feed-manufacturing industry.

Early in 1968, the Japanese Government offered further technical aid to develop and improve Thailand's agriculture and to promote the import of Thai farm products by Japan. OTCA sent agricultural technicians to Thailand to study the country's agriculture and to recommend and introduce modern farming

techniques. The survey team's report concluded that Japanese assistance should be concentrated on improvement of production of corn, grain sorghum, oilseeds, beans, cassava, tobacco, kenaf, and bananas and other fruits. Japanese technicians are to help in improving quality as well as quantity of production.

Since the above-mentioned mission, several additional teams of Japanese experts have visited Thailand to assist in developing specific programs. A three-man team of soybean experts was in Thailand in 1969. A principal aim of their mission was to initiate a research program for developing a soybean variety suitable to growing conditions in Thailand and of a quality desired by Japanese importers. A mission of sericulture experts surveyed the silk production and processing situation and developed recommendations for expanding production and improving quality. The team recommended establishment of a sericulture research and training center in northeastern Thailand. Japanese experts are working on a wide range of other agricultural endeavors in Thailand. In 1969, these technicians included experts in sericulture, mulberry cultivation, cooperatives, land management, bamboo management, rice physiology, rice entomology, soybean production, cassava processing, river-basin planning, rural water supplies, and agricultural insecticides.

In late 1969, a private Japanese firm announced plans to establish a banana plantation of some 12,000 to 15,000 acres in south Thailand and to import the total production into Japan. For this purpose, a joint Japanese-Thai company is being formed. It is predicted that within 5 years annual exports of bananas from this plantation to Japan will exceed 100,000 tons. Another private Japanese company has indicated that it will grow and can vegetables and pineapples in Thailand for export to Japan.

Recent investment by three of Japan's largest trading firms in the biggest elevator operation in Thailand--the Bangkok Drying and Silo Company--doubled that company's capitalization and should expedite collection and export of corn. Several Japan-Thailand trade conferences were held in Tokyo and Bangkok in 1968 and 1969 to promote further trade between the two countries.

Japan is interested in importing more cotton and cottonseed but has indicated that no technical experts are available to assist Thailand in cotton production. Another item Japan has considered is tobacco. However, a recent Japanese survey indicated that Thai tobacco is not of a quality suited to Japanese cigarette brands. Thus, prospects of materially increasing trade in this commodity are limited for the immediate future, although the Thai have indicated much interest in exporting leaf tobacco to Japan.

Cambodia

In 1965, a Japanese consortium was established to initiate production of corn on a commercial basis in Cambodia; the Cambodia Economic Cooperation Company (SOCODAC) is owned jointly by five Japanese trading firms (50 percent) and the Japanese Government (50 percent). Funds were supplied by the Government's Overseas Economic Cooperation Fund. In May 1968, this company established a joint agricultural venture in Cambodia called Societe Khmer des

Cultures Tropicales (SOCTROPIC). Ownership of this company is divided--51 percent for the Cambodian Government and 49 percent for the Japanese consortium.

In November 1968, MAF announced plans to start construction of an agricultural experiment station in Cambodia. Six Japanese agricultural experts were dispatched to Cambodia, with about \$370,000 worth of machinery and equipment.

In Cambodia, OTCA operates a training center in crop production (extension and demonstration) and one in livestock raising. In 1969, Japan and Cambodia extended agreements for Japanese assistance at the training centers for 2 years. The agreements provide for Japanese technicians, machinery, and materials.

In 1969, SOCTROPIC announced plans to build a large cornseed farm within 5 years in the Prek Knot area of Cambodia, on part of 12,000 acres to be irrigated under the United Nations water power and irrigation development plan. A private Japanese company announced plans for joint ventures, with local Cambodian cooperatives, in corn growing and livestock raising. Also in 1969, OTCA had a team of technicians in Cambodia to study technical problems involved in corn production and export. Within 10 years, Japan expects to be importing 200,000 to 300,000 tons of corn from Cambodia.

Laos

Laos is a rather isolated country, with an estimated population of around 3 million, most of whom are subsistence farmers. Consequently, it offers only a limited market for Japanese industrial products. Its potential for exporting agricultural products to Japan is also limited. Nevertheless, Japan has shown considerable interest in contributing economic and technical assistance. Most assistance has taken the form of aid to develop the country's infrastructure and contributions to help Laos meet its foreign exchange needs.

Japan's aid started in October 1958, upon the signing of an economic and technical cooperation agreement between the two countries. Two major projects, totaling approximately \$2.8 million, were undertaken under this agreement. These involved the installation of electric generating equipment and a water filtration and distribution system in Vientiane.

The major Japanese effort to assist in the agricultural development of Laos is the operation of an experimental farm near the village of Tha Ngone, some 25 kilometers north of Vientiane. The Japanese have been working with the Lao at this location since 1966 to operate and improve an experimental farm of some 200 acres. Currently, only about half of the total area is being used. In 1969, 13 Japanese and 10 Lao agricultural experts were working there. Major emphasis is on rice, and four crops are being harvested annually by using a combination of early varieties of Japanese rice and IRRI varieties. Additionally, experimental work is going forward on corn, pineapples, sweetpotatoes, bananas, poultry, swine, and cattle.

Adjacent to the experimental farm, the Japanese are developing from jungle some 2,000 acres of irrigated land on which Lao farmers will be settled. Japanese experts will help guide these settlers' farm operations.

Early in 1969, several Japanese sericultural experts went to Laos to establish a sericulture center near Vientiane. This project is aimed at producing silk for import by Japan.

Besides silk, only corn appears to be a possible item for export to Japan. The present high cost of moving corn to shipside at Bangkok must be overcome if this potential is to be exploited.

South Vietnam

The Japanese have expressed a keen interest in making a major contribution to the agricultural development of South Vietnam. A start has already been made, and there are plans for rapid expansion once the war there is terminated. South Vietnam, with a population of some 18 million, is an attractive market, both immediate and long-term, for a wide range of Japanese industrial products. It is a potential source for several tropical and other farm commodities that Japan must import.

Several ventures were launched in South Vietnam during 1969. One is a program to help improve ricegrowing and other farming in the Mekong Delta. This venture involves about 25 companies, which have set up in Tokyo a joint firm called International Agricultural Development Company. Another group of 30 companies is planning agricultural redevelopment in the Danhim Dam area. This group is called the Agricultural Development Council. Private Japanese enterprise has indicated that it will build an agricultural tool factory and an experimental farm and agricultural technicians training school in South Vietnam.

Philippines

This relatively nearby tropical country of some 37 million persons is important as an export outlet for Japan's industrial products. Also, Japan has had a long and continuing interest in the import of agricultural commodities from the Islands. Even prior to World War II, Japanese capital, trading firms, and technicians were important in the abaca industry, at that time one of the most important in the Philippines.

The Japanese have helped establish and staff a training center for those pursuing small-scale industries in the Philippines. A model farm is being developed which will place major emphasis on improved rice cultivation methods and help introduce improved riceseed to farmers. As of mid-1968, OTCA had four agricultural specialists stationed in the country. For several years, Philippine agricultural technicians have participated in 1-year courses conducted by OTCA in Japan. Four fields of study have been emphasized--rice cultivation, farm mechanization, irrigation, and horticulture.

Among new agriculturally related industrial enterprises in which Japanese firms are involved financially and technically are a \$32 million sugar refinery and a \$43 million fertilizer plant. Japan is also helping to build new food-processing facilities. The Japanese have a major interest in the expansion of imports of bananas and other tropical fruits and fruit products from the Philippines.

India

Japan's agricultural assistance to India has been centered largely on projects to increase rice yields. Technical aid activities began in 1953 with a campaign to popularize Japanese techniques of paddy cultivation. In 1959, at India's request, four Japanese farmers demonstrated intensive cropping of rice and wheat on a farm in Uttar Pradesh. As a result, the Government of India asked Japan to help establish demonstration farms in four major rice states, and in 1962, these farms were established in West Bengal, Orissa, Bihar, and Gujarat. In December 1964, an agreement was signed to establish four additional demonstration farms in Andhra Pradesh, Mysore, Kerala, and Maharashtra. Technicians at these farms demonstrate to farmers the techniques of ricegrowing and farm management and the operation of agricultural machinery. All eight farms have now been turned over to the Government of India.

In addition to the demonstration farms, Japan has established four agricultural extension centers in India which are supplied with Japanese machinery and materials and staffed with Japanese instructors.

Japan is extending credit aid to India for the importation of Japanese agricultural machinery, fertilizers, agricultural chemicals, and industrial machinery and goods. It was recently announced that Japan will help build a new fertilizer factory in India.

Under a proposed scheme, Japan will assist in the production (including financing) and transport of bananas from the vicinity of Madras to Japan. Also, Japan is considering very substantial increases in purchases of tropical fruit juices from India and will provide machinery and technical assistance for processing.

In addition to buying more fruit from India, Japan may buy more Indian tobacco and cotton. Also, Japan would take oilseeds, if they were available.

Other South and Southeast Asia

In Malaysia, machinery has been supplied for a project on the Prai River that is designed to boost rice production. The Japanese Government and private Japanese companies have been involved in this project.

For several years, an economic and technical cooperation agreement with Burma has existed. This arrangement has supplied Burma with farm mechanization, irrigation, and other equipment to improve and expand agricultural production.

Japan is interested in increasing imports of pulses from Burma.

Japanese technicians are helping to build farm equipment plants in Pakistan. An agricultural training center, where emphasis is being placed on farm mechanization, has been established in East Pakistan. In addition, farm mechanization studies are being carried out. Japan may buy more Pakistani cotton.

Japan's efforts in Nepal are limited. Currently, one Japanese agricultural expert works with the Nepalese at an agricultural experiment station in the Terai region bordering India. He is working on rice and various other crops. A private Japanese firm is working under contract on an FAO-sponsored agricultural development project in the Terai.

Japan has helped establish an agricultural demonstration farm in Ceylon. Major assistance has been given to the development of farm cooperatives. Recently, an agricultural research team composed of experts on general agriculture and rice cultivation spent some time there to determine how Japan could be most helpful.

In Afghanistan, the Japanese are operating a training center for those engaging in small-scale industries.

Japan's aid to agriculture is now extended to the remote Himalayan kingdom of Bhutan. There, Japanese scientists have established an agricultural experiment station and an agricultural school.

Other Areas

Australia, with its abundance of land and its technical capabilities for greatly expanding agricultural production, is of keen interest to Japanese importers. Japanese capital, in at least one instance in conjunction with American capital, has in recent years been invested in large-scale development projects to expand production of grain sorghums for export to Japan. Japanese private interests have also invested in grazing land and other projects aimed at boosting Australia's production of beef for export.

In Iran, the Japanese are assisting in a land development project, one aim of which is to boost cotton production for export to Japan. They are also involved in a project designed to improve grazing on some 800,000 acres. In addition, the Japanese have helped establish and staff a technical training school for those in small-scale industries.

Japan's close neighbors, Taiwan and Korea, are areas of special investment interest, but emphasis there is on nonagricultural projects.

Latin America, with its potential for expanding production of virtually any farm commodity and a rapidly growing market for industrial goods, is an area of much interest to the Japanese. For some years, the Japanese have been involved in several significant agricultural development projects in the region. A high percentage of private Japanese capital investment overseas has gone to Latin America. More than a decade ago, the Japanese Government extended

technical and financial assistance to the large-scale settlement of Japanese farmers in Brazil and Bolivia. Private Japanese interests are currently developing large livestock-raising enterprises in Brazil and Paraguay.

In late 1969, a Japanese team was in Mexico to survey corn and grain sorghum production and export capabilities. An arrangement whereby Mexican co-operatives will sell these commodities to Japan's major farm supply cooperative is reported to be under consideration.

A Japanese trade and investment mission visited the Dominican Republic in 1969. Japan is making a major effort to expand its share of the market there for such farm-related industrial products as light agricultural machinery and portable irrigation pumps. The mission also investigated the possibilities of providing technical and financial assistance to agricultural experiment stations and sugar refineries as well as to some industries not related to agriculture.

The Japanese are also interested in expanding agricultural imports from Africa, as well as selling more Japanese industrial products there. However, the continent's relatively sparse population and the subsistence level at which a high percentage of the people live make the potential market for Japanese goods smaller there than in the other less developed regions of the world. Several African countries have recently strongly urged Japan to take more of their farm products so their trade deficits with Japan can be reduced. Japan's limited agricultural assistance to date has been largely concentrated in East Africa, with major emphasis placed on feed grains. A major trading firm has announced plans for a large farm production development in the Sudan. The Japanese have been involved in smaller projects of a similar nature in Tanzania and Kenya. In late 1969, a Japanese survey mission visited Kenya, Uganda, Tanzania, and Zambia to look into the possibilities of increasing agricultural imports from these countries. Corn is a commodity that the Japanese would especially like to import in greater volume from East Africa.

OUTLOOK

As incomes rise rapidly, Japanese consumers are demanding a more abundant supply of foods and placing greater emphasis on variety and nutrition. The Government implements its policy of improving the quality of the national diet in many ways. Per capita consumption of starchy foods is decreasing, while that of meat, dairy products, and fruits and vegetables is rising. The calorie contribution by starchy foods to the Japanese diet decreased from 74 percent in 1955 to 60 percent in 1966. At the same time, the contribution of animal protein foods rose from 6 percent to 11 percent and that of fruits and vegetables from 4 percent to 6 percent.

In 1966, MAF predicted that total consumption of meat, milk and other dairy products, and fruits would more than double within 10 years. It also predicted that consumption of soybeans, green vegetables, sugar, fats and oils, and silk would increase by more than half. Consumption of wheat and eggs would increase substantially, and that of rice would remain about the same.

Japan has become practically self-sufficient in the production of rice, most vegetables, and eggs, but most of the increased demand for food and other agricultural products will have to be met indirectly (for example, feedstuffs for production of livestock and poultry products) or directly by imports. Consequently, for the indefinite future, Japan will need to import increasing quantities of feed grains and other feedstuffs, wheat, oilseeds, pulses, meats, tropical fruits, raw silk, and numerous other farm products.

Whether the United States can share fully in the expected continued expansion of farm product imports will depend partly on Japan's success in assisting expansion of farm production in LDC's, particularly in Southeast Asia. In fact, the degree of any such success will partly determine whether the United States even maintains its current position in the Japanese market. Some success has already been achieved. However, it is too soon to expect much in the way of increased production, as most projects have only recently been started. Many others are in the survey stage or still under discussion. Undoubtedly, additional projects will be forthcoming in the years ahead. Overall, a steady but moderate expansion in the supply of farm products available for export to Japan can almost surely be expected from these efforts. Competition with U.S. farm products will gradually increase, but the major competitive impact of these efforts is a decade or more in the future. At this point, estimates of the specific volumes to become available are highly tentative at best.

Feed Grains and Other Feedstuffs

Numerous locations in Southeast Asia are well suited for the production of various feedstuffs. In only a decade, Thailand expanded production of corn to the point where total exports, which were negligible until the mid-1950's exceeded a million tons in 1964. Exports have since expanded even further. Considerable success in the near future can probably be anticipated from projects to produce corn for export in Cambodia and Indonesia. Additional projects for corn growing are likely to be developed for other Southeast Asian countries. By no means will all of the anticipated increase in production be exported to Japan. More will be consumed domestically by the relatively small but expanding poultry and livestock industries. Some will be exported to nearby markets--such as Singapore, Hong Kong, and Taiwan--and some may be exported beyond the region. However, it appears reasonable to expect that by 1975, exports of corn from Southeast Asia to Japan may be in the range of 1.5 million to 2.0 million tons annually, compared with 0.7 million tons in 1968.

Attempts to expand production of grain sorghum are likely to meet with some success in Indonesia, Thailand, perhaps Burma, Australia, and elsewhere. By 1975, exports to Japan from Southeast Asia could be in the range of 200,000 to 300,000 tons annually. A roughly equivalent amount may be moving from Australia to Japan. In 1968, sorghum imports from Southeast Asia and Australia totaled less than 100,000 tons.

Dried cassava for use in mixed feeds is a relatively new item of import by Japan, but one in which there now appears to be much interest, although 1967's imports totaled slightly less than 10,000 tons. Cassava is grown very

widely for food in the tropics, and much of the land in Southeast Asia is suited for its production. There is, therefore, a tremendous potential for expanding production for export, and this commodity represents a competitive threat to U.S. feedstuffs in the Japanese market. The biggest gain in cassava production and trade has been registered by Thailand. Exports of dried cassava products from that country expanded from 54,000 tons in 1955 to 782,000 tons in 1967. Most exports now go to Western Europe for use in mixed feeds.

Oilseeds

To help meet the rapidly growing requirements for vegetable oils and oil-meals, the Japanese foreign assistance programs are placing considerable emphasis on increasing production in Southeast Asia, particularly in Thailand. There and elsewhere, Japanese agricultural technicians are working to develop soybean varieties that under Southeast Asian conditions will produce high yields and a type of bean desired by Japanese processors. Other oilseeds, such as sesame, safflower, and peanuts, are also being pushed. Some increase in export availabilities can probably be expected. However, up to the mid-1970's, it seems unlikely that oilseeds production in Southeast Asia will expand to the point where it will have a significant impact on the import market in Japan.

Tropical Fruits

Southeast Asia is particularly well situated for producing tropical fruits to meet the rapidly growing demand in Japan, where imports of bananas alone expanded from 24,000 tons in 1955 to 638,000 tons in 1968. The recently announced banana-growing projects in Thailand and those proposed for southern India and the Philippines should have little difficulty in marketing all their produce in Japan. Systems for coordinating tropical fruit production and marketing, for processing or export, are being improved in the Philippines, Malaysia, Thailand, Pakistan, and India. These countries will thus soon be in a better position to serve Japan's import needs.

Silk

After long being a major exporter Japan is rapidly increasing its import demand for raw silk, owing to increased demand and lower production. Considerable success has been achieved in South Korea in expanding and improving the production of raw silk for export, part of which goes to Japan. Japan is sponsoring silk production expansion and improvement projects in Thailand, Laos, Cambodia, and Indonesia. Initiation of silk projects in other countries of South and Southeast Asia is anticipated. Silk culture is well suited to small Asian farms where adequate family labor is available. Silk does not compete directly with any U.S. farm product.

Tobacco

India is the principal Asian country supplying tobacco to Japan. This trade seems likely to expand, as some Indian tobaccos are well suited to the requirements of the Japanese cigarette industry. Thailand is also anxious to sell tobacco to Japan. Japanese experts have looked into the possibility of importing significant quantities of Thai leaf but report that the Japanese cigarette industry cannot use very large quantities of the kind of tobacco available from Thailand.

Cotton

Japan imports significant quantities of cotton from Pakistan and India and until very recent years took a small quantity from Burma. Production of a type cotton desired by Japan is increasing in Pakistan and Australia, and cotton exports from these countries can be expected to be a growing threat to the U.S. position in the Japanese market. Japan has indicated a desire to import more cotton and cottonseed from Thailand if production can be sufficiently expanded.

Livestock Products

Japan will meet most of its rapidly growing requirements for livestock products from domestic production based on imported feedstuffs. Nevertheless, some increase should occur in imports of poultry, red meats, tallow, cattle hides, and perhaps certain other livestock products. It is unlikely that the countries of South and Southeast Asia will export a significant quantity of livestock products to Japan. However, Australia and New Zealand will be important sources of meat imports.

In addition, a Japanese private business has recently announced a new venture to produce pork on Cheju Island, Korea. Reportedly, a U.S. firm is providing part of the financing and technical assistance. Plans call for a large hog-raising operation, slaughterhouse, refrigeration plant, and other facilities. The Japanese firm will ship frozen pork to Japan for sale as pork cuts, ham, and sausage.



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